

Editorial

The Scourge that Was

It is only an occasional pock-marked face that reminds us of a dreaded disease which has happily been wiped out from the surface of our planet. The origin of this remarkable feat goes back to Edward Jenner (1749-1823), a kindly family physician working in the British countryside. The story goes that he was told by a patient, a dairy maid, that she could not get smallpox because she had already had cowpox. Her confidence was based on folk wisdom. Although Jenner was quite certainly not the first physician to learn this piece of folklore, he was perhaps the first to take it seriously, and see in it the possibility of a deliberate design for prevention of smallpox. What he was certainly the first to do was to collect the courage to try out this idea. In order to understand why it needed much courage, let us examine what Jenner did on 14 May 1796 (1). He took some pus from a milkmaid, Sarah Nelmes, who was in active stages of cowpox, and vaccinated with this pus a boy, James Phipps. So far, so good. Cowpox is an innocuous infection to pass on to a human being. What he did after a few days was not so innocent. He inoculated the boy with pus from an active human smallpox lesion to check whether the boy really had acquired protection from smallpox. Fortunately, he had, and therefore nothing untoward happened. But before that, except for Jenner's conviction based on folk belief, nobody knew what would happen. Encouraged by this experiment, Jenner repeated his work on a few more subjects with the same results. He published his results in 1798 in a small book *An Inquiry into the Causes and Effects of the Variolae Vaccinae*.

Let us try to imagine what would be the fate of an idea like that of Jenner today. No ethics committee would approve the experiment. And, if somehow the experiment gets done, no statistician would pay any heed to results based on just one subject, and therefore no journal would publish the study. Before we jump to the conclusion that our attitudes today are incorrect and inimical to scientific discovery, we should consider a few more facts. In Jenner's times, research was not a vocation but a hobby. The motives behind his experiment were possibly service to mankind, scientific curiosity, perhaps also some name and fame, but certainly not a degree, a promotion or a financial reward. That is why there was a gap of nearly thirty years between his first getting to know the folk belief and doing the experiment. In the intervening period he probably went through many pangs of conscience, weighing the unethical nature of the experiment on one hand, and the unethical act of denying the world the probable outcome of the experiment. It was finally his teacher and long-time friend, the legendary John Hunter, who tilted the balance and persuaded Jenner to go ahead with the experiment. Today, the motives for research are rather mundane and material. Therefore the investigator's own conscience is not always a dependable safeguard against unethical or fraudulent research. Every age has its own *yugadharma*.

Jenner's motives were not monetary, but the rewards came all the same. In 1802, the British Parliament voted Jenner a gift of £10,000, and in 1807, another gift of £20,000. To commemorate the bicentenary of Jenner's historical experiment, IJPP is proud to retell this tale to its readers.

REFERENCES

1. Castiglioni A. *A History of Medicine*. (Krumbhaar EB, Transal & Ed). New York : Alfred A Knopf. 2nd Edition, 1947; 642-644.